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CHARLES E. WANDS
ALLEN DYER, DOPPELT, MILBRATH & GILCHRIST
1401 CITRUS CENTER ,255 SOUTH ORAGE AVENUE
BOX 3791
ORLANDO, FL 32802-3791

EXAMINER	
LE, TRAN Q	

ART UNIT	PAPER NUMBER
2633	

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/015,024	BRANCH ET AL.	
	Examiner	Art Unit	
	Tran Q. Le	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *20 and 21* is/are allowed.

6)☒ Claim(s) *1-6,10 and 12-16* is/are rejected.

7)☒ Claim(s) *7-9,11 and 17-19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 November 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The following title is suggested: COMPACT OPTICAL TRANSCEIVER MODULE HAVING HOUSING WITH COUPLING MECHANISM AND ASEMBLY METHOD THEREOF. The words like "improved", "improvement of", and "improvement in" should not be included in the title of the invention.

2. The disclosure is objected to because of the following informalities:

a) The description of the figures in the Detailed Description is out of order and is not as specific as is necessary to describe the invention adequately and accurately. There are no indication of what order each figure should be discussed; instead, the figure references are rarely mentioned and put in random order.

b) There are no figure references for most reference numerals in the Detailed Description. The reference numerals are scattered among the figures.

Appropriate correction is required.

Claim Objections

3. Claims 1 and 12 are objected to because of the following informalities: it is unclear of the meaning of the language "on the other of said carrier or said cover". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 12, 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 1 and 12 recite the limitation "said cooperating structure" in lines 6 and 9, respectively. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 17 recites the limitation "said coupling elements" in line 5 and claims 18 and 19 recite the limitation "said pair of coupling elements" in lines 1 and 3, respectively. There are insufficient antecedent basis for this limitations in the claims.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brillhart (US Patent No: 6,325,552) in view of Choy (US Patent No: 6,213,806).

Regarding claim 1, Brillhart discloses an optical transceiver (10, fig. 1) comprising: a carrier (12, fig. 1); a cover (32, fig. 1) couplable to a portion of said

carrier to define a transceiver enclosure (40, fig. 1); an electro-optical assembly (col. 3, lines 6-7) supported in said enclosure (col. 1, lines 6-8).

Brillhart differs from the claim 1 in that Brillhart does not disclose a coupling mechanism coupled to one of the carrier or the cover, whereby the coupling mechanism cooperates with the cooperating structure on the carrier to allow pivoting motion in a controlled path of the cover relative to the carrier between closed and opened conditions relative to the enclosure about a pivoting axis offset from the transceiver. However, Choy teaches an IC socket (11, fig. 4) with the coupling mechanism (fig. 4) coupled to one of the carrier (13, fig. 4) or the cover (15, fig. 4), whereby the coupling mechanism cooperates with the cooperating structure (14, fig. 4) on the carrier to allow pivoting motion in a controlled path of the cover relative to the carrier between closed and opened conditions relative to the enclosure about a pivoting axis offset from the IC socket (11, fig. 4). Therefore, it would have been obvious to one having skill in the art at the time the invention was made to incorporate the coupling mechanism of Choy in the optical transceiver housing of Brillhart in order to achieve a fast and easy access to the electro-optical assembly during inspection and/or repair of the internal circuit board and the components carried thereon without damaging them.

Regarding claim 2, Brillhart further discloses a separable cover (32, fig. 1 and col. 4, lines 24-31) couplable to cooperating structure (14, fig. 4) of a distal portion of said carrier to define a transceiver enclosure (fig. 1).

Regarding claim 3, the combination of Brillhart ans Choy discloses the coupling mechanism (14, fig. 4 of Choy, 29, fig. 8A-B, col. 4, lines 59-67 and col. 5, lines 1-5) that cams the cover to move to the closed condition without interference with upstanding components of the electro-optical assembly (col. 5, lines 66-67 and col. 6, lines 1-24).

Regarding claim 4, the combination of Brillhart and Choy also teaches that the coupling mechanism cams the cover to move to the closed condition without applying lateral loads to upstanding components of the electro-optical assembly (i.e. interpreted by the IC package) which would be sufficient to force said components from their intended upright positions (col. 5 of Choy, lines 66-67 and col. 6, lines 1-24).

Regarding claim 5, the combination of Brillhart and Choy discloses the coupling mechanism positions such that at least one of said upstanding components (i.e. interpreted by the IC package 12, fig. 11 of Choy) is in a thermally conductive heat transfer relationship to an interior surface of said cover when the latter is in the closed condition (col. 6, lines 25-33).

Regarding claim 6, the combination of Brillhart and Choy teaches the coupling mechanism that includes a pair of separate and laterally spaced apart coupling elements (col. 4, lines 59-67 and col. 5, lines 1-5) that project from said cover.

Regarding claim 10, Brillhart further teaches that the cover and the carrier are made of material that provides for EMI shielding (col. 3, lines 5-6 and col. 3, lines 24-56). It is inherently known that the shielding for the electromagnetic

interference is provided by using the module's outer shielded housing manufactured out of metal or metal plated plastic.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brillhart (US Patent No: 6,325,552) in view of Choy (US Patent No: 6,213,806) and in further view of Poplawski et al (5,879,173).

Regarding claims 12-16, the combination of Brillhart and Choy differs from claims 12-16 in that it does not disclose an optical transceiver housing being mounted to a wall access opening of a data transfer system. However, Poplawski, teaches a data transfer system (col. 13, lines 43-45, a data transfer system is interpreted in terms of a host computer, server, or PC) including a wall (770, fig. 17, and col. 16, line 10) having an access opening (776, fig. 17, and col. 16, line 44) and an adapter card assembly (728, fig. 17, and col. 16, lines 9-10), in combination with an optical transceiver (fig. 14 and col. 26-48) which is mounted to said wall access opening (776, fig. 17 and col. 16, lines 41-44). Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to incorporate a data transfer system as taught by

Poplawski in the system of the combination of Brillhart and Choy in order to make use of the optical transceiver in the optical data communications.

Allowable Subject Matter

12. Claims 7-9, 11, and 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is an examiner's statement of reasons for allowance:

As to claims 7-9 and 11, the prior arts of record fails to teach the specific coupling elements and cooperating structure as cited in claims 7-9 and 11.

As to claims 17-19, the prior arts of record fails to teach the specific coupling elements and cooperating structure of the optical transceiver module which is mounted to the wall access opening in the data transfer system as cited in claims 17-19.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

14. Claims 20 and 21 are allowed.

15. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 20 and 21, the prior arts of record fails to teach the specific axis of the controlled path of the pivoting motion being remote from the transceiver between the open and closed conditions of the cover as cited in claims 20. The prior arts of record also fails to teach that the steps of providing a coupling mechanism and cooperating structure described in claim 20 includes providing material for each for EMI shielding as cited in claim 21.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sayers et al. (US Patent No: 6,556,811) is cited to show an air cooled transceiver enclosure which includes a plurality of heat-sink cones and cooling posts about the enclosure.

Ikeya et al. (US Patent No: 5,807,104) is cited to show an IC test socket with a cover pivotly mounted on the main body of the socket to be freely movably between the open and closed position relative to the main body and a heat sink mounted on top of the cover to carry heat away from the electrical part.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran Q. Le whose telephone number is (571)272-2046. The examiner can normally be reached on 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TQL

Hanh Phan
Primary Examiner
11/26/04